

Title (en)  
ANNULUS VALVE FOR CONCENTRIC TUBING HANGERS

Publication  
**EP 0349685 B1 19920226 (EN)**

Application  
**EP 88306135 A 19880706**

Priority  
EP 88306135 A 19880706

Abstract (en)  
[origin: EP0349685A1] An improved valve for controlling flow through a tubing hanger (14) in a unit having a concentric tubing system and includes upwardly facing recesses or blind pockets (12) in the hanger with a valve member (21) in each of said pockets and having circumferential seals (26) around its upper end and around its lower enlarged end. The valve members are biased upwardly in their pockets by springs (34) and by annulus pressure which is transmitted to the lower end of the valve members through valve passages. The valve members each includes an upper projection or rod (28) which is engaged by an annular actuator (72) controlled responsive to a downwardly exerted spring force and by a pressure area differential which is exposed to annulus pressure and control pressure to urge the annular actuator downwardly which movement moves the valve member to its downward or open position. Control line pressure is provided to the actuator and to the exterior surface of the valve members below their upper seals so that the movement of the valve members can be controlled from remote locations.

IPC 1-7  
**E21B 34/02**

IPC 8 full level  
**E21B 33/04** (2006.01); **E21B 34/02** (2006.01)

CPC (source: EP US)  
**E21B 33/04** (2013.01 - EP US); **E21B 34/02** (2013.01 - EP US)

Cited by  
US5687794A; GB2389599A; GB2389599B; GB2243383A; GB2243383B; US8434560B2; US6840323B2; US7219741B2; WO2008137340A1

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**US 4869318 A 19890926**; DE 3868634 D1 19920402; EP 0349685 A1 19900110; EP 0349685 B1 19920226; SG 63692 G 19920904

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**US 24253088 A 19880912**; DE 3868634 T 19880706; EP 88306135 A 19880706; SG 63692 A 19920618